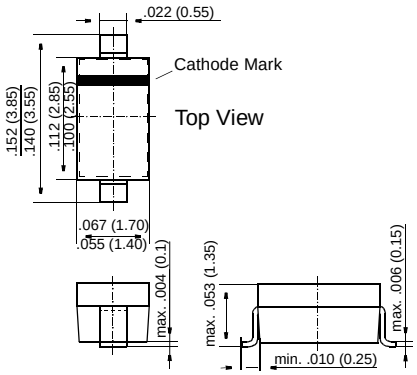
BB721

Tuner Diodes

SOD-123



Dimensions in inches and (millimeters)

FEATURES

- Silicon epitaxial planar capacitance diodes with very wide effective capacitance variation for tuning the whole range of UHF television bands.
- Two BB721/BB721S tuner diodes in series are used for direct satellite receivers.

- These diodes are available as singles or as matched sets of two or more units according to the tracking condition described in the table of characteristics.
- This diode is also available in SOD-323 case with the type designation BB721S.

MECHANICAL DATA

Case: SOD-123 Plastic Case
Weight: approx. 0.01 g

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Value	Unit
Reverse Voltage	V_R	32	V
Ambient Temperature	T_{amb}	125	°C
Storage Temperature Range	T_S	–55 to +125	°C

GENERAL SEMICONDUCTOR®

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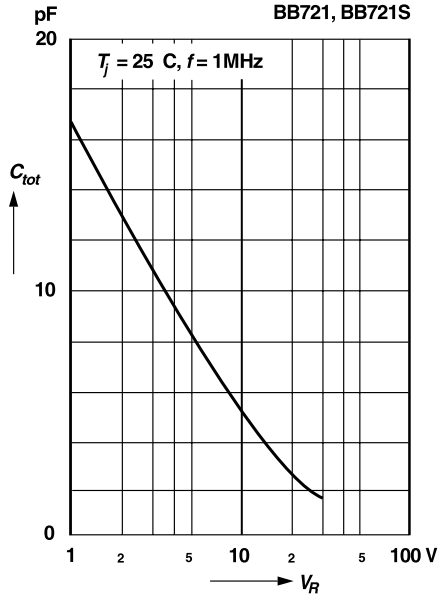
BB721

ELECTRICAL CHARACTERISTICS

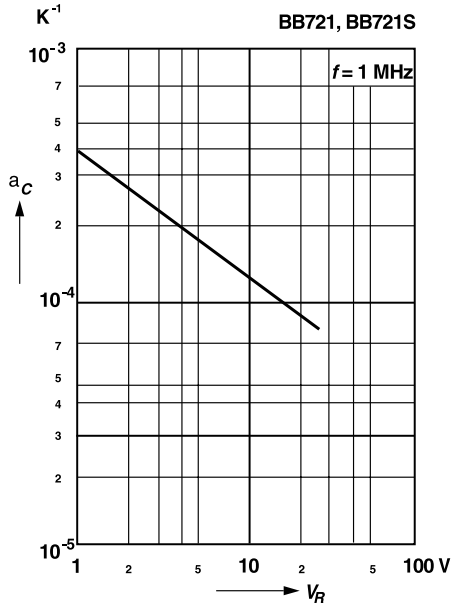
Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at I_R = 100 μA	$V_{(BR)R}$	32	–	–	V
Leakage Current at V_R = 30 V	I_R	–	–	10	nA
Capacitance f = 1 MHz at V_R = 28 V at V_R = 1 V	 C_{tot} C_{tot}	 1.9 17.5	 – –	 2.3 20	 pF pF
Effective Capacitance Ratio, f = 1 MHz at V_R = 1 to 28 V	$\frac{C_{tot}\ (1\ V)}{C_{tot}\ (28V)}$	8.2	–	9.8	–
Series Resistance at f = 470 MHz, C_{tot} = 14 pF	r_s	–	0.55	–	Ω
Series Inductance	L_s	–	2.5	–	nH
For any two of six consecutive diodes in the carrier tape, the maximum capacitance deviation in the reverse bias voltage of V_R = 0.5 to 28 V is max. 2.5%.					

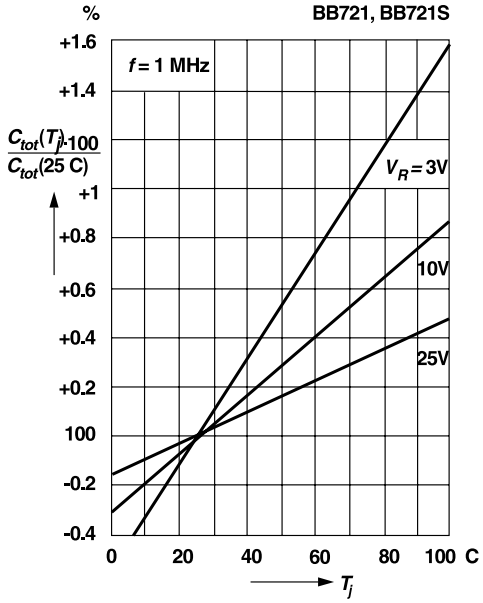
Capacitance versus reverse voltage



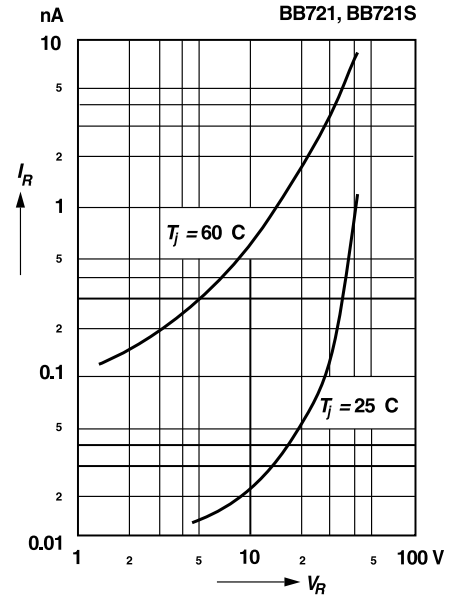
Temperature coefficient of capacitance versus reverse voltage



Relative capacitance versus junction temperature



Leakage current versus reverse voltage



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Q-Factor
versus frequency